

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006229**Date Inspected:** 08-Apr-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1030**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Chung Fu Kuan**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower, Jacking and Deviation Saddles**Summary of Items Observed:**

On this date, 4/8/09, Caltrans OSM Quality Assurance (QA) Inspector Mike Brcic was present during the times noted above for observations relative to the work being performed on castings, in either the Fabrication shop #4 or Foundry Shop at Japan Steel Works.

The QA Inspector witnessed the mechanical test (tensile) of heat no. 08W145-1 for west deviation saddle W2-W2.

The (1) test specimen were prepared and tested after the stress relieved condition. The structural casting material grade was 415 and the tensile test specimen was 12.5 mm in diameter with a gage length of (50) mm. The QA Inspector observed that the results of the yield strength, tensile strength, elongation, and reduction of area on the tensile test specimen tested were in compliance with the table listed under the Castings section of the contract special provisions.

The QA Inspector also witnessed the mechanical test (Charpy-V-Notch) of heat no. 08W145-1 for west deviation saddle W2-W2. The (3) test specimens were tested after the stress relieved condition and were dimensionally prepared within the tolerances in accordance with ASTM E-23 Figure 2 Izod (Cantilever-Beam) Impact Test Specimen, Type D. The (3) specimens were held at a temperature of (0) degrees Celsius for 10 minutes and temperature of the liquid bath was held to within plus or minus (1) degree Celsius. The (3) specimens were removed from the liquid bath and the test was conducted within the (5) second time frame as per the requirements in ASTM E-23. The QA Inspector observed that the results of the individual impact tests and the average of the (3) specimens along with the lateral expansion measured of each specimen were in compliance with the table listed under the Castings section of the contract special provisions. Afterward, the QA Inspector reviewed the test report for accuracy and completeness and assigned Caltrans Lot number B275-002-09.

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## WELDING INSPECTION REPORT

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W2E3 - Casting section moved to begin joining to built up section.

W2W2 - Magnetic Particle testing (MT) was being done in trough areas, wet/yoke continuous method . Level II technician was Mr Kohama.

W2W3 - Repairs are having their excess reinforcement removed by way of carbon arc.

T1-1 - Observed Quality Control (QC) Ultrasonic Technicians Mr. Kobayashi and Sato performing UT of CJP welds. Inspection is a courtesy look prior to Post Weld Heat Treatment of casting. Accept/Reject criteria used, Table 6.4 "Compression Joints" of D1.5 2002, and the approved WQCP.

T1-2 - Welders 08-5153, 08-5018 and 81-5438 are welding joints 8Y-5U-2, 8Y-5U-3 and 8Y-6U respectively. QCI verified amperes / voltages, parameters were found to be in compliance to procedure SJ3012-5, contract documents and special provisions.

T1-3 - Weld procedure SJ3012-1-1, (buttering of cast material) was used by welders #07-4510, and 07-4528, on joints 9Y-11U stem radius, (1st layer), and 9Y-12U-2 radius (1st layer), respectively, all governing contract documents and special provisions appeared to be met at this time.

E2E1 - Carbon Arc technicians were wrapping up equipment, and surfaces appeared to be complete.

E2W1 - Casting sitting idle.

WJS - Rough machining being performed in No 4 Machine shop.

Unless otherwise noted, all observations reported on this date appeared to be in general compliance with applicable contract documents.

### Summary of Conversations:

No significant conversations to report on this day.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy, 1(510)385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Brcic,Michael	Quality Assurance Inspector
<b>Reviewed By:</b>	Lanz,Joe	QA Reviewer

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